Medical Genetics Summaries (MGS): Pharmacogenetics beyond the drug label

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Medical Genetics Summaries (MGS)

Unites the latest drug and gene information with dosing recommendations from the FDA, and other professional societies:

18 have recommendations from the Dutch Pharmacogenetics Working Group (DWPG)

14 have recommendations from the Clinical Pharmacogenetics Implementation Consortium (CPIC)

3 have recommendations from the American Society of Clinical Oncology (ASCO)

Other guideline sources include: Canadian Pharmacogenomics Network for Drug Safety (CPNDS), French National Network of Pharmacogenetics (RNPGx), American College of Rheumatology (ACR), and more.

MGS simplifies the implementation of precision medicine

- Explains the influence of genetic variant(s) on drug action and metabolism
- Links to relevant tests in the NIH Genetic Testing Registry (https://www.ncbi.nlm.nih.gov/gtr/)
- Standardized for quick reference, up-to-date, centralized source of pharmacogenetics information

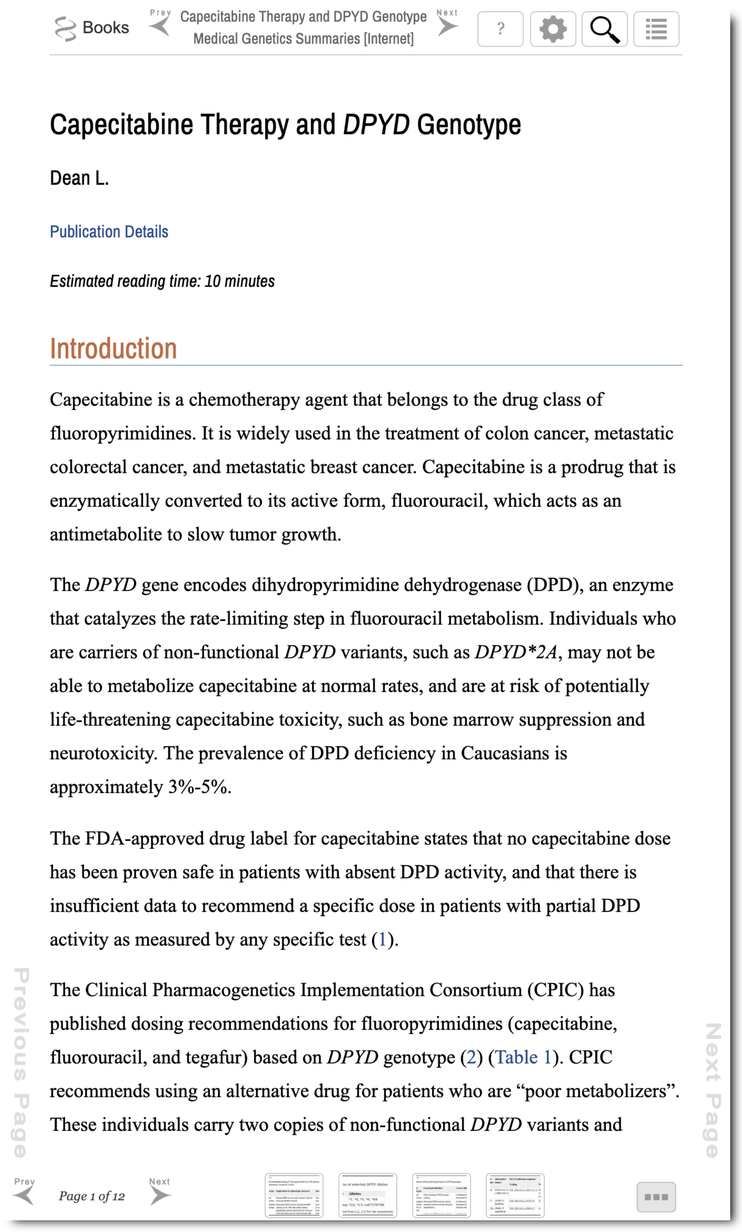
NIH Genetic Testing Registry (GTR)

The GTR comprises ~60,000 orderable, genetic tests, which have been voluntarily submitted by genetic testing labs from across the world.

Of these tests, 407 are pharmacogenetic tests, testing for at least one drug response, with some tests analyzing a panel of genetic variants, accounting for over 100 drug responses.

The FDA lists 170 therapeutic products with pharmacogenetic information in the drug labelling. Approximately 99 of these drugs have tests in GTR.

MGS brings together pharmacogenetic dosing guidelines and summarizes the evidence



MGS is home to 48 drug summaries, with new summaries being continually added.

MGS provides clinicians with supplemental information when the drug label lacks pharmacogenetic dosing recommendations based on genotype.

For example, for the chemotherapy drug capecitabine, both the FDA label and CPIC guidance agree there is no safe dose for individuals who lack DPD activity.

However, for individuals who have partial DPD activity, CPIC provides dose recommendations whereas the FDA states there is insufficient data for dose alterations.

Not at your computer? Each summary can be viewed in PubReader (shown above) for easy reading on small screens, or a summary or the whole book can be downloaded in PDF format.

MGS and GTR are free, easy to use, and ready to help you optimize your care today

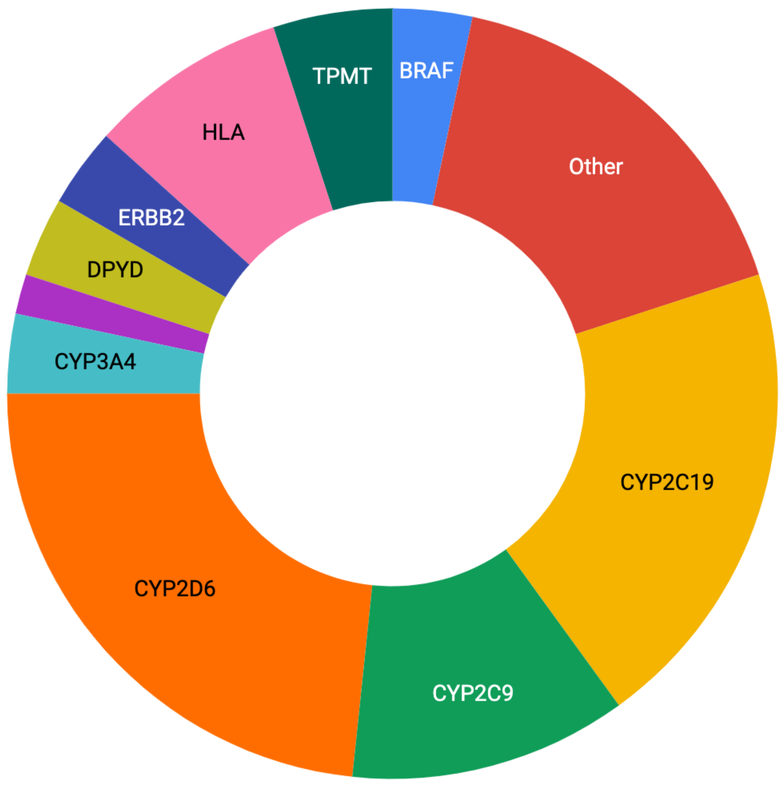
Genes discussed in MGS

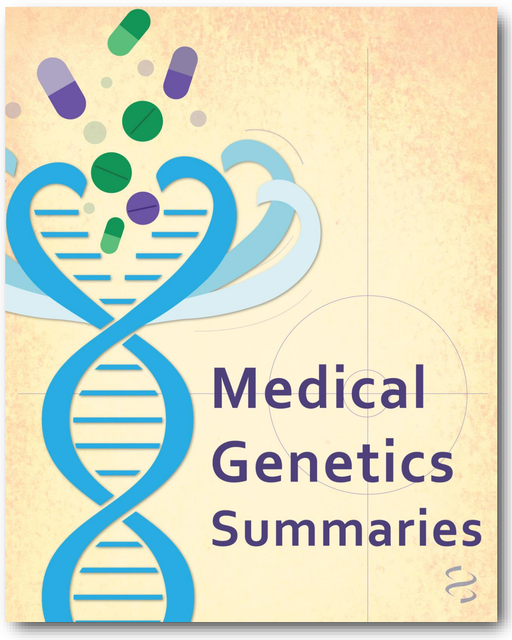
CYP2D6 (23%) is the most common gene

Followed by CYP2C19 (20%) and CYP2C9 (12%)

"Other" includes the following genes

- *G6PD*
- *INFL3*
- *IFNL4*
- *MT-RNR1*
- *NRAS*
- *UGT1A1*
- *VKORC1*





Medical Genetics Summaries is:

- Indexed in PubMed
- Displayed in GTR and MedGen and ready to display in your EHR – contact us
- Available as full-text online and as PDF from NCBI Bookshelf: http://go.usa.gov/xVEhN

MGS in numbers

- 6 editors
- 48 drug summaries
- 100 expert reviewers from clinical, research and laboratory settings

The MGS top 5

The most popular summaries are about the following drugs:

1. Codeine
2. Warfarin
3. Clopidogrel
4. Azathioprine
5. Allopurinol

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